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Yuichi Yagawa

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EXAMINER

MAHMOOD, REZWANUL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,998	Applicant(s) YAGAWA, YUICHI	
	Examiner REZWANUL MAHMOOD	Art Unit 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-12,15,18-21,23,24 and 29-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-12,15,18-21,23,24 and 29-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/06/2008 has been entered. Claims 1-3, 6-12, 15, 18-21, 23, 24, and 29-33 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-11, 18, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (US Publication 2003/0192040) in view of Peters (US Patent 4,999,766) in further view of Usami (US Patent 6,961,144).

With respect to claim 1, Vaughan discloses a method for distributing data among a plurality of data storage systems comprising:

producing profile information for a first data object that is stored in a first data storage system, said profile information comprising content-based information

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associated with said first data object (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

communicating said profile information from the first data storage system to at least one second data storage system in said plurality of data storage systems

(Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

calculating an interest metric at each of said at least one second data storage systems based on said profile information and on selection criteria maintained at said each of said at least one second data systems, wherein said selection criteria comprises information specific to said each of said at least one second data storage systems, said information including keywords received from a user at said each of said at least one second data storage systems (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

receiving interest metrics at said first data storage system from said at least one of said second data storage systems (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Figure 1);

However, Vaughan does not explicitly disclose:

producing a target second data storage systems based on said interest metrics;
and

communicating said first data object from the first data storage system to the first N of said target second data storage systems,

wherein said first data object is copied to said each target second data storage system depending on content-based information associated with said first data object.

The Peters reference, however, discloses claimed producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Peters to producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

Vaughan and Peters do not explicitly disclose:

producing an ordered set of target storage systems and communicating data object in said ordered set.

The Usami reference, however, discloses claimed producing an ordered set of target storage systems and communicating data object in said ordered set (Usami: Column 9, lines 20-38).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Peters with the teachings of Usami to produce an ordered set or target storage systems and communicate data object in said ordered set for transmitting and receiving data between a data transmission device and data reception device which are connected via

a network (Usami: Column 1, lines 12-15).

With respect to claim 6, Vaughan in view of Peters and in further view of Usami discloses the method of claim 1, further comprising:

communicating said first data object to said target second data storage system if its interest metric exceeds a predetermined threshold (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Usami: Column 9, lines 20-38).

With respect to claim 7, Vaughan in view of Peters and in further view of Usami discloses the method of claim 1, wherein said interest metric indicates whether or not to communicate said first data object to said target second data storage system (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Usami: Column 9, lines 20-38).

With respect to claim 8, Vaughan in view of Peters and in further view of Usami discloses the method of claim 7 wherein if the interest metric indicates not to copy said first data object to said target second data storage system, then determining a replication site from among said second data storage systems independently of content of said first data object and copying said first data object to said replication site (Peters:

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Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44;
Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4;
Paragraph 26, lines 1-15; Usami: Column 9, lines 20-38).

With respect to claim 9, Vaughan in view of Peters and in further view of Usami discloses the method of claim 18 wherein said selection criteria are stored in said first data storage system, said method further comprising communicating said first data object to said at least one target second data storage system based on said interest metric and a predetermined criterion (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Usami: Column 9, lines 20-38).

With respect to claim 10, Vaughan in view of Peters and in further view of Usami discloses the method of claim 9 further comprising additional selection criteria for an additional second data storage system, said method further comprising communicating said first data object to said additional second data storage system based on said profile information and said additional selection criteria (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Usami: Column 9, lines 20-38).

With respect to claim 11, Vaughan in view of Peters and in further view of Usami discloses the method of claim 18 wherein said selection criteria are stored in a selection server system separate from said first data storage system and from said second data storage system (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Usami: Column 9, lines 20-38), said method further comprising:

communicating said profile information to said selection server system (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Usami: Column 9, lines 20-38); and

receiving a selection indication from said selection server system (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Usami: Column 9, lines 20-38),

wherein said first data object is selectively communicated to said second data storage system depending on said selection indication (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 13, lines 19-44; Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Usami: Column 9, lines 20-38).

With respect to claim 18, Vaughan discloses a method for distributing data

among a plurality of data storage systems comprising:

obtaining selection criteria in a first data storage system (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

producing profile information for a first data object that is stored in said first data storage system, said profile information comprising content-based information associated with said first data object (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

communicating the selection criteria and the profile information to at least one second data storage system (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

generating, at each of said at least one second data storage systems, an interest metric based on the selection criteria and the profile information, wherein said selection criteria comprises information specific to said each of said at least one second data storage systems, said information including keywords received from a user at said each of said at least one second storage systems (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

receiving the interest metrics at the first data storage system from said each of said at least one second data storage systems (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

However, Vaughan does not explicitly disclose:

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producing a target second data storage system based on said interest metrics:
and

communicating said first data object to each of the first N of said target second data storage system if its corresponding interest metric exceeds a predetermined threshold.

The Peters reference, however, discloses claimed producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Peters to producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

Vaughan and Peters do not explicitly disclose:

producing an ordered set of target storage systems and communicating data object in said ordered set.

The Usami reference, however, discloses claimed producing an ordered set of target storage systems and communicating data object in said ordered set (Usami: Column 9, lines 20-38).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Peters with the teachings of Usami to produce an ordered set or target storage systems and communicate data object in said ordered set for transmitting and receiving data between a data transmission device and data reception device which are connected via a network (Usami: Column 1, lines 12-15).

With respect to claim 19, Vaughan in view of Peters and in further view of Usami discloses the method of claim 18 further comprising receiving, at said first data storage system, said selection criteria from one or more data storage systems other than said first data storage system (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6).

With respect to claim 29, Vaughan discloses a method for distributing data to a plurality of data storage systems in accordance with content-based interest metrics corresponding to each of said data storage systems, the method comprising:

producing a profile containing information representative of the content of a first data object stored in a first data storage system (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

receiving interest information from a second data storage systems specifying one or more categories of information requested for storage at each of said plurality of

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second data storage systems (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

However, Vaughan does not explicitly disclose:

calculating interest metrics for each of a plurality of second data storage systems with respect to the first data object using the profile information and the interest information;

selecting one or more target second data storage systems to receive the first data object based upon their respectively calculated interest metrics; and

copying said first data object from said first data storage system to said one or more target second data storage systems.

The Peters reference, however, discloses claimed calculating interest metrics for each of a plurality of second data storage systems with respect to the first data object using the profile information and the interest information, selecting one or more target second data storage systems to receive the first data object based upon their respectively calculated interest metrics, and copying said first data object from said first data storage system to said one or more target second data storage systems (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Peters to producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of

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said target second data storage systems for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

Claims 2, 3, 12, 15, 20, 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (US Publication 2003/0192040) in view of Peters (US Patent 4,999,766) in further view of Usami (US Patent 6,961,144) as applied to claims 1, 6-12, 15, 18, 19, and 29 above, and further in view of Wisner (US Publication 2002/0163910).

With respect to claim 2, Vaughan in view of Peters and in further view of Usami discloses the method of claim 1, however, does not explicitly disclose wherein said first data storage system comprises a server component in communication with a data storage component.

The Wisner reference, however, discloses claimed first data storage system comprising a server component in communication with a data storage component (Wisner: Paragraph 9, lines 2-13; Figure 1).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan, Peters and Usami with the teachings of Wisner to have a data storage system comprising a server component for a system and method for providing access to resources (Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7).

With respect to claim 3, Vaughan in view of Peters and in further view of Usami discloses the method of claim 2, wherein said second data storage system comprises a server component in communication with a data storage component (Wisner: Paragraph 9, lines 2-13; Figure 1).

With respect to claim 12, Vaughan discloses a distributed data storage system comprising a plurality of data servers, each data server comprising:

- a client interface component configured for communication with one or more clients to exchange data (Vaughan: Paragraph 7, lines 1-9; Figures 1-2);

- a data storage interface component configured for data communication with a data storage component (Vaughan: Paragraph 7, lines 1-9; Figures 1-2); and

- a data processing component configured to:

- produce profile information associated with a first data object that is stored in said data storage component, said profile information comprising content-based information associated with content of said first data object (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

- communicate said profile information (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6);

However, Vaughan does not explicitly disclose communicating to a plurality of candidate data servers;

The Wisner reference, however, discloses communicating data to a plurality of data servers (Wisner: Paragraph 9, lines 1-13; Figure 1; Figure 3);

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Wisner to have a data storage system comprising a server component and a replicator component for a system and method for providing access to resources (Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7).

Vaughan in view of Wisner discloses:

generate, at each of said plurality of candidate data servers, an interest metric based on the profile information and selection criteria maintained at each of said plurality of candidate data servers, wherein said selection criteria comprises information specific to said each of said plurality of candidate data-servers, said information including keywords received from a user at said each of said plurality of candidate data servers (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7);

receive interest metrics at said data storage component from each of said candidate data servers (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7);

However, Vaughan and Wisner do not explicitly disclose:

select at least one candidate data server to receive said first data object based

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upon the interest metrics such that a candidate data server is selected if its corresponding interest metric exceeds a predetermined threshold; and.

copy said first data object to the selected candidate data server.

The Peters reference, however, discloses selecting at least one candidate data storage to receive said first data object based upon the interest metrics such that a candidate data storage is selected if its corresponding interest metric exceeds a predetermined threshold, and copy said first data object to the selected candidate data storage(Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Wisner with the teachings of Peters to select at least one candidate data server to receive said first data object based upon the interest metrics such that a candidate data server is selected if its corresponding interest metric exceeds a predetermined threshold, and copy said first data object to the selected candidate data server. (Peters: Column 2, lines 44-45).

With respect to claim 15, Vaughan in view of Wisner and in further view of Peters discloses the data storage system of claim 12 wherein said interest metrics are binary indicators that indicate whether or not to copy said first data object to each of said candidate data servers (Vaughan: Paragraph 26, lines 1-15).

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With respect to claim 20, Vaughan discloses a data system comprising:
a plurality of data centers (Vaughan: Paragraph 7, lines 1-9; Figures 1-2); and
a plurality of client systems in data communication with said data centers
(Vaughan: Paragraph 7, lines 1-9; Figures 1-2),

each data center comprising:

a data storage component (Vaughan: Paragraph 7, lines 1-9; Figures 1-2);
a receiver component (Vaughan: Paragraph 7, lines 1-9; Figures 1-2); and
file selection criteria (Vaughan: Paragraph 7, lines 1-9; Figures 1-2),

However, Vaughan does not explicitly disclose:

a file server component operative to exchange data between a client system and
said data storage component;

a replicator component;

The Wisner reference, however, discloses claimed a file server component
operative to exchange data between a client system and said data storage component
and a replicator component (Wisner: Paragraph 9, lines 1-13; Figure 1; Figure 3);

Therefore, it would have been obvious to a person of ordinary skill in the art, at
the time the invention was made, to modify the teachings of Vaughan with the teachings
of Wisner to have a data storage system comprising a server component and a
replicator component for a system and method for providing access to resources
(Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7).

Vaughan in view of Wisner discloses:

wherein said replicator component is operative to produce profile data for a data

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object that is to be replicated among one or more candidate target data centers, to communicate said profile data to at least one of said candidate target data centers, to receive an interest metric from each of said candidate target data centers, wherein said receiver component is operative to receive the profile data information from a source data center and to calculate an interest metric based on the profile data and selection criteria that is maintained in said receiver component and specific to the data center of which the receiver component is a part, said selection criteria comprising keywords received from a user of said data center, said receiver component further operative to communicate the interest metric to said source data center for selectively copying said data object (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 33, lines 1-6; Figure 1),

However, Vaughan and Wisner do not explicitly disclose:

selectively communicate said data object to a candidate target data center if its interest metric exceeds a predetermined threshold, said profile data representative of content of said data object,

The Peters reference, however, discloses claimed selectively communicate said data object to a candidate target data center if its interest metric exceeds a predetermined threshold, said profile data representative of content of said data object (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Wisner with

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the teachings of Peters to selectively communicate said data object to a candidate target data center if its interest metric exceeds a predetermined threshold, said profile data representative of content of said data object for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

With respect to claim 21, Vaughan in view of Wisner and in further view of Peters discloses the system of claim 20, however, do not explicitly disclose wherein said candidate target data centers are ordered to produce an ordered set based on their corresponding interest metrics and said replicator component is further operative to communicate said data object to the first N target data centers selected from said ordered set.

The Usami reference, however, discloses claimed producing an ordered set of target storage systems and communicating data object in said ordered set (Usami: Column 9, lines 20-38).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Peters with the teachings of Usami to produce an ordered set of target storage systems and communicate data object in said ordered set for transmitting and receiving data between a data transmission device and data reception device which are connected via a network (Usami: Column 1, lines 12-15).

With respect to claim 23, Vaughan in view of Wisner in view of Peters discloses the system of claim 20 wherein said interest metric is an indication of whether or not to communicate said data object to said candidate target data center(Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Figure 1; Peters: Column 4, lines 18-29 and 51-64).

With respect to claim 24, Vaughan discloses a data system comprising:
a plurality of data centers (Vaughan: Paragraph 7, lines 1-9; Figures 1-2); and
a plurality of client systems in data communication with said data centers
(Vaughan: Paragraph 7, lines 1-9; Figures 1-2),

each data center comprising:
a data storage component (Vaughan: Paragraph 7, lines 1-9; Figures 1-2);
a collection of selection criteria comprising selection criteria provided from other
data centers (Vaughan: Paragraph 7, lines 1-9; Figures 1-2),

However, Vaughan does not explicitly disclose:
a file server component operative to exchange data between a client system and
said data storage component;
a replicator component;

The Wisner reference, however, discloses claimed a file server component
operative to exchange data between a client system and said data storage component
and a replicator component;

Therefore, it would have been obvious to a person of ordinary skill in the art, at

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the time the invention was made, to modify the teachings of Vaughan with the teachings of Wisner to have a data storage system comprising a server component and a replicator component for a system and method for providing access to resources (Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7).

Vaughan in view of Wisner discloses:

wherein said replicator component is operative to produce profile data for a data object that is to be replicated among one or more candidate target data centers, wherein said replicator component is operative to produce a plurality of interest metrics based on said collection of selection criteria and on said profile data, each interest metric corresponding to a data center in said plurality of data centers (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 26, lines 1-15; Paragraph 33, lines 1-6; Figure 1),

However, Vaughan and Wisner do not explicitly disclose:

wherein said replicator component is operative to produce a candidate target data center based on their corresponding interest metrics, communicate said data object to the target data centers if its corresponding interest metric exceeds a predetermined value.

The Peters reference, however, discloses claimed producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Peters to producing a target second data storage systems based on a interest metric and communicating a first data object from the first data storage system to the first N of said target second data storage systems for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

Vaughan, Wisner, and Peters do not explicitly disclose:

to produce an ordered set of said candidate target data centers based on their corresponding interest metrics,

communicate said data object to each of the first N target data centers selected from said ordered set.

The Usami reference, however, discloses claimed producing an ordered set of target storage systems and communicating data object in said ordered set (Usami: Column 9, lines 20-38).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Peters with the teachings of Usami to produce an ordered set or target storage systems and communicate data object in said ordered set for transmitting and receiving data between a data transmission device and data reception device which are connected via a network (Usami: Column 1, lines 12-15).

Claims 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over

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Vaughan (US Publication 2003/0192040) in view of Wisner (US Publication 2002/0163910) and in further view of Peters (US Patent 4,999,766).

With respect to claim 30, Vaughan discloses a method for distributing data among a plurality of data storage systems comprising:

receiving profile information representative of the content of a first data object stored in a first data storage system (Vaughan: Paragraph 7, lines 1-9; Paragraph 19, lines 1-14; Figure 1);

However, Vaughan does not explicitly disclose the first data storage system at a directory server;

The Wisner reference, however, discloses claimed first data storage system comprising a server component in communication with a data storage component (Wisner: Paragraph 9, lines 2-13; Figure 1).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan with the teachings of Wisner to have a data storage system comprising a server component for a system and method for providing access to resources (Wisner: Paragraph 1, lines 1-2; Paragraph 9, lines 2-7).

Vaughan in view of Wisner discloses:

receiving at the directory server interest information from a plurality of second data storage systems specifying one or more categories of information requested for storage at each of said plurality of second data storage systems (Vaughan: Paragraph

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7, lines 1-9; Paragraph 19, lines 1-14; Paragraph 22, lines 1-4; Paragraph 33, lines 1-6; Figure 1);

However, Vaughan and Wisner do not explicitly disclose:

calculating at the directory server interest metrics for each of the plurality of second data storage systems with respect to the first data object using the profile information and the interest information;

transmitting said interest metrics from the directory server to the first data storage system;

selecting at the first data processing system one or more target second data storage systems to receive the first data object based upon the interest metrics calculated at the directory server; and

copying said first data object to said one or more target second data storage system.

The Peters reference, however, discloses claimed calculating interest metrics, transmitting interest metrics, selecting one or more target storage and copying data object to said one or more target storage (Peters: Column 4, lines 18-29 and 51-64; Column 5, lines 48-64; Column 11, lines 61-67; Column 12, lines 1-12; Column 13, lines 19-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Vaughan and Wisner with the teachings of Peters to calculate at the directory server interest metrics for each of the plurality of second data storage systems with respect to the first data object using

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the profile information and the interest information, transmitting said interest metrics from the directory server to the first data storage system, selecting at the first data processing system one or more target second data storage systems to receive the first data object based upon the interest metrics calculated at the directory server, and copying said first data object to said one or more target second data storage system for sending files to a host from a workstation or receiving files from a host by a workstation (Peters: Column 2, lines 44-45).

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan (US Publication 2003/0192040) in view of Peters (US Patent 4,999,766) in further view of Usami (US Patent 6,961,144) as applied to claims 1, 6-12, 15, 18, 19, and 29 above, and further in view of Barker (US Publication 2002/0143976).

With respect to claim 31, Vaughn in view of Peters in further view of Usami discloses the method of claim 1, however, do not explicitly disclose updating metadata at the first data storage system with an identifier of the at least one target second data storage system to which the first data object is copied.

The Barker reference, however, discloses updating metadata and providing a notification message comprising asset identifier of the asset identifier of the asset for which updated metadata is available and the metadata storage device locator, which identifies in which metadata storage device the updated metadata is stored (Barker: Abstract, lines 1-16; Paragraph 28, lines 1-18; Paragraph 29, lines 1-14).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Peters, Vaughan and Usani with the teachings of barker to update metadata at the first storage system with an identifier of the at least one target second data storage system to which the first data object is copied for an asset provider to update metadata associated with an asset and to distribute the updated metadata to one or more distribution endpoints (Barker: Paragraph 8, lines 6-8).

With respect to claim 32, Vaughn in view of Peters in further view of Usami discloses the data storage system of claim 12, however, do not explicitly disclose wherein said data processing component is configured to update metadata stored by said data storage component with identifiers of the one or more candidate data servers to which the first data object is copied.

The Barker reference, however, discloses updating metadata and providing a notification message comprising asset identifier of the asset identifier of the asset for which updated metadata is available and the metadata storage device locator, which identifies in which metadata storage device the updated metadata is stored (Barker: Abstract, lines 1-16; Paragraph 28, lines 1-18; Paragraph 29, lines 1-14).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Peters, Vaughan and Wisner with the teachings of barker to update metadata at the first storage system with an identifier of the at least one target second data storage system to which the first data object is copied for an asset provider to update metadata associated with an asset and

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to distribute the updated metadata to one or more distribution endpoints (Barker: Paragraph 8, lines 6-8).

With respect to claim 33, Vaughn in view of Peters in further view of Usami discloses the method of claim 18, however, do not explicitly disclose updating metadata at the first data storage system with an identifier of the at least one target second data storage system to which the first data object is copied.

The Barker reference, however, discloses updating metadata and providing a notification message comprising asset identifier of the asset identifier of the asset for which updated metadata is available and the metadata storage device locator, which identifies in which metadata storage device the updated metadata is stored (Barker: Abstract, lines 1-16; Paragraph 28, lines 1-18; Paragraph 29, lines 1-14).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Peters, Vaughan and Wisner with the teachings of barker to update metadata at the first storage system with an identifier of the at least one target second data storage system to which the first data object is copied for an asset provider to update metadata associated with an asset and to distribute the updated metadata to one or more distribution endpoints (Barker: Paragraph 8, lines 6-8).

Remarks

Applicant's arguments with respect to claims 1-3, 6-12, 15, 18-21, 23, 24, and 29-33 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REZWANUL MAHMOOD whose telephone number is (571)272-5625. The examiner can normally be reached on M - F 10 A.M. - 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/R. M./
Examiner, Art Unit 2164

January 31, 2009

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Supervisory Patent Examiner, Art Unit 2164